

**What is claimed is:**

1           1.    A    non-intrusive    access    control    method,  
2    comprising the steps of:  
3            acquiring identification of a first tag and real-  
4            time circumstance information both related to a  
5            detection area; and  
6            determining whether the first tag is permitted based  
7            on circumstance identification corresponding to  
8            the detection area, the identification of the  
9            first tag and the real-time circumstance  
10           information.

1           2.    The method as claimed in claim 1, wherein the  
2    real-time circumstance information comprises user  
3    information indicating existence of any other tag in the  
4    detection area.

1           3.    The method as claimed in claim 1, wherein the  
2    real-time circumstance information comprises time  
3    information comprising at least current time or total  
4    time.

1           4.    The method as claimed in claim 1, wherein the  
2    real-time circumstance information comprises physical  
3    information indicating status of an object.

1           5.    The method as claimed in claim 1, wherein, when  
2    a plurality of tags exist in the detection area, a tag  
3    thereof corresponding to the highest level user role  
4    among the user roles of the tags is identified as the  
5    first tag representing the tags.

1        6.    The method as claimed in claim 1, wherein the  
2    identification of the first tag corresponds to a user  
3    role, as one of a plurality of user roles corresponding  
4    to a plurality of levels.

1        7.    The method as claimed in claim 6, further  
2    comprising determining that the first tag is permitted,  
3    when a plurality of tags exist in the detection area, and  
4    a tag thereof corresponding to a user role with higher  
5    rank than the user role of the first tag.

1        8.    The method as claimed in claim 1, wherein the  
2    corresponding circumstance identification of the  
3    detection area corresponds to a circumstance role, as one  
4    of a plurality of circumstance roles with hierarchical  
5    relationship, each comprising at least one circumstance  
6    attribute.

1        9.    The method as claimed in claim 8, further  
2    comprising defining the hierarchical relationship based  
3    on the circumstance attribute before the determining  
4    step.

1        10.   The method as claimed in claim 1, wherein the  
2    determining step is based on one or more policies each  
3    recording the relationship of user role, circumstance  
4    role, real-time circumstance information and permission.

1        11.   The method as claimed in claim 10, wherein the  
2    policies is presented in extensible markup language (XML)  
3    format.

1        12. The method as claimed in claim 10, further  
2 comprising the steps of:

3        searching for policies related to the circumstance  
4                identification corresponding to the detection  
5                area, the identification of the first tag and  
6                the real-time circumstance information;

7        determining the first tag is not permitted when no  
8                policy allowing permission is located; and

9        determining the first tag is permitted when at least  
10               one related policy with permission and no  
11               related policy denying permission is located.

1        13. An non-intrusive access control system,  
2 comprising:

3        a sensor for acquiring identification of a first tag  
4                and real-time circumstance information both  
5                related to a detection area; and

6        a computing device for determining whether the first  
7                tag is permitted based on circumstance  
8                identification corresponding to the detection  
9                area, the identification of the first tag and  
10               real-time circumstance information.

1        14. The system as claimed in claim 13, wherein the  
2 real-time circumstance information comprises user  
3 information indicating whether another tag exists in the  
4 detection area.

1        15. The system as claimed in claim 13, wherein the  
2 real-time circumstance information comprises time

3 information comprising at least current time or total  
4 time.

1 16. The system as claimed in claim 13, wherein the  
2 real-time circumstance information comprises physical  
3 information indicating status of an object.

1 17. The system as claimed in claim 13, wherein,  
2 when a plurality of tags exist in the detection area, the  
3 computing device treats a tag corresponding to the  
4 highest ranked user role among the user roles of the tags  
5 as the first tag representing the tags.

1 18. The system as claimed in claim 13, wherein the  
2 identification of the first tag corresponds to a user  
3 role, as one of a plurality of user roles corresponding  
4 to a plurality of levels.

1 19. The system as claimed in claim 18, wherein the  
2 computing device further determines that the first tag is  
3 permitted, when a plurality of tags exist in the  
4 detection area, and a tag thereof corresponding to a user  
5 role with higher rank than the user role of the first  
6 tag.

1 20. The system as claimed in claim 13, wherein the  
2 computing device performs the determination step based on  
3 one or more policies each comprising the relationship of  
4 user role, circumstance role, real-time circumstance  
5 information and permission.

1 21. The system as claimed in claim 20, wherein the  
2 computing device further searches for policies related to

3 the circumstance identification corresponding to the  
4 detection area, the identification of the first tag and  
5 the real-time circumstance information, and determines  
6 the first tag is not permitted when no related policy  
7 allowing access is located or determines the first tag is  
8 permitted when at least one policy with permission and no  
9 related policy denying access is located.

1 22. The system as claimed in claim 15, wherein the  
2 non-intrusive access control system comprises a radio  
3 frequency identification (RFID) system.